

Remarks

Claims 19-42 are now pending in this application. Applicants have cancelled claims 1-18 and present new claims 19-42 to clarify the present invention. Applications respectfully request favorable reconsideration of this application.

The Examiner rejected claims 1-3, 5, 8, 9, 11, and 12 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 3,942,100 to Kauferle et al. in view of U.S. patent 4,785,138 to Breitenbach et al. The Examiner rejected claims 4 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. in view of U.S. patent 5,716,574 to Kawasaki. The Examiner rejected claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. in view of Japanese patent document JP 06-261456. The Examiner rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. in view of European patent 0 825 465 to Johansen. The Examiner rejected claims 14-17 under 35 U.S.C. § 103(a) as being unpatentable over Kauferle et al. in view of Breitenbach et al. in view of U.S. patent 6,441,712 to Ainsworth.

Kauferle et al. does not suggest the present invention as recited in newly presented independent claim 19 since, among other things, Kauferle et al. does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Rather, Kauferle et al. suggests an adjustable reactive power compensator for a transmission line,

wherein the power compensator avoid problems such as the inability to fully limit over-voltages during start-up conditions, excitation of harmonics and subharmonic oscillations, among others. The compensator according to Käuferle et al. includes a main reactive element, such as a choke, that is controlled by DC bias magnetization and whose reactive power is varied in response to an error signal generated by a control circuit. A variable shunt reactance, which has an exciting winding connected across the line at the junction, has an additional power winding inductively coupled to the exciting winding for supplying excitation current to the main reactive element. The shunt reactance is designed to have a no-load inductive power loss that is large compared to the normal magnetization power loss of a standard distribution transformer. For added stabilization, a discretely adjustable capacitor regulated by the control circuit may be connected in parallel with exciting winding of the shunt reactance. This means in short that inductance caused by the transformer winding is compensated by a capacitive shunt. Hence, Käuferle et al. does not suggest compensation of a capacitance by an inductance. Käuferle et al. does not suggest any inductor. In fact, the word "inductor" does not appear in Käuferle et al.

Furthermore, Käuferle et al. suggests power transmission by overlines. The problem of capacitive reactance does not occur with power transmission by overlines. As a result, Käuferle et al. does not suggest the problem solved by the present invention or a solution thereto. The present invention relates to transferring ac current long distances on a cable. This causes a capacitive impedance, which makes such power transfer not economically feasible. The present invention provides a system that includes a high-voltage ac voltage line that includes an extruded cable and at least one inductor that compensates for the capacitive reactance by a inductive reactance.

Combining the structure suggested by Käuferle et al. with the structure suggested by Breitenbach et al. does not suggest the present invention since, among other things, Breitenbach et al. does not overcome the above-described deficiencies of Käuferle et al. Along these lines, Breitenbach et al. does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Rather, Breitenbach et al. suggests an electric cable for use as a phase winding for linear motors. Breitenbach et al. does not suggest overcoming a capacitive load resulting in part from length of the cable. In fact, Breitenbach et al. does not include the terms "reactive" or "shunt compensation".

In view of the above, the combination of Käuferle et al. and Breitenbach et al. does not suggest the present invention as recited in newly presented independent claim 19 or claims 20-42, which depend thereon.

The combination of Käuferle et al., Breitenbach et al. and Kawasaki does not suggest the present invention as recited in claims 24, 25, 35 or 36, which replace claims 4 and 13, since, among other things, Kawasaki does not overcome the above-described deficiencies of Käuferle et al. and Breitenbach et al. Along these lines, Kawasaki does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. The Examiner only cites Kawasaki et al. as suggesting cross-linked polyethylene insulation and a cable handling the voltages recited in claims 35 and 36. Such does not suggest an installation for

transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Therefore, the combination of Käuferle et al., Breitenbach et al. and Kawasaki does not suggest the present invention as recited in claims 24, 25, 35 or 36.

The combination of Käuferle et al., Breitenbach et al. and Japanese patent document JP 06-261456 does not suggest the present invention as recited in claims 27 or 28, which replace claims 6 and 7 since, among other things, Japanese patent document JP 06-261456 does not overcome the above-described deficiencies of the combination of Käuferle et al. and Breitenbach et al. Along these lines, Japanese patent document JP 06-261456 does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. The Examiner only cites Japanese patent document JP 06-261456 as suggesting an inductor partially or completely buried in the ground. Such does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Therefore, the combination of Käuferle et al., Breitenbach et al. and Japanese patent document JP 06-261456 does not suggest the present invention as recited in claims 27 or 28.

The combination of Käuferle et al., Breitenbach et al. and European patent 0 825 465 to Johansen does not suggest the present invention as recited in claim 32, which replaces claim 10 since, among other things, European patent 0 825 465 to Johansen does not overcome the above-described deficiencies of the combination of Käuferle et al. and Breitenbach et al. Along these

lines, Johansen does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. The Examiner only cites Johansen as suggesting an optical fiber laid along a cable or integrated in the cable for use of a device for protection of the installation and/or commercial communication within the installation and/or with the surrounding. Such does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Therefore, the combination of Käuferle et al., Breitenbach et al. and Johansen does not suggest the present invention as recited in claim 32.

The combination of Käuferle et al., Breitenbach et al. and Ainsworth does not suggest the present invention as recited in claims 37-41, which replace claims 14-17 since, among other things, Ainsworth does not overcome the above-described deficiencies of the combination of Käuferle et al. and Breitenbach et al. Along these lines, Ainsworth does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. The Examiner only cites Ainsworth as suggesting an installation designed for a maximum transmissible power via an ac voltage line of 50 MW-600 MW and an inductor for a reactive power of 5-30 MVAR. Such does not suggest an installation for transmission of electric power that includes at least one inductor operative to generate reactive current to compensate for capacitive current produced in at least one extruded cable. Therefore, the combination of Käuferle et al., Breitenbach et al. and Ainsworth does not suggest the present invention as recited in claims 37-41.


In view of the above, the references relied upon in the office action, whether considered alone or in combination, do not suggest patentable features of the present invention. Therefore, the references relied upon in the office action, whether considered alone or in combination, do not make the present invention obvious. Accordingly, Applicant submits that the present invention is patentable over the cited references and respectfully requests withdrawal of the rejections based upon the cited references.

If an interview would advance the prosecution of this application, Applicant respectfully urges the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge insufficient fees and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

Date: 1/8/07



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